FRD\*\*////\*YUInstructional Annual Program Review and Planning Update Form Fall 2024

## BACKGROUND:

**Program review is an integral part of the campus planning process. As programs and areas monitor their progress on the current comprehensive four-year program review, changes in need and scope can be expected. This Annual PR Update form is designed to outline and request modifications to the current program review that occur between comprehensive four-year review cycles, as needed.**

**Examples of a requested change include new information such as action plans, outcomes modifications, personnel changes, technology needs, and capital expenditures requirements. As programs and areas monitor their progress on the previous comprehensive four-year program review, the form provides the basis to suggest a change in plans and processes to improve student success and institutional effectiveness.**

## SUBMISSION:

**Program:**

Computer Information Systems

**Principal Author(s):**

Anna Carlin

**Dean:**

Carlos Ayon

**Submission Date:**

11/27/2024 9:46:04 PM

**Author Signature:**

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| Electronically signed by Anna Carlin on 11/27/2024 8:39:43 PM |

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# Part 1: Review of Data

## Use the data provided by the Office of Institutional Effectiveness (OIE)--[available in August 2024](https://fullcolledu-my.sharepoint.com/:f:/g/personal/dberumen_fullcoll_edu/Ejn54PAVVhJLqimOjiLWBBYBPkPdoZEFZxZtScvvyibo6A)--to review your program completion and success rates and compare them to the Institution Set Standards for course completion and success rates. Then, answer these questions:

1. **Where your program meets or exceeds the college-wide standard for completion and success, to what do you attribute your success?**

Based on the data provided, both the CIS and CISG programs overall exceeded the Institution Set Standards for both course completion and success rates.

The CIS program overall exceeded the institutional standard set for success and completion. Reasons for this could be attributed to:

• Following department standards and best practices used by all classes to ensure consistency

• Scheduling classes at times and modalities to meet student demands - daytime, evenings, online, hybrid, and on-campus

• Available labs for students to meet with instructors or complete coursework

• Remote, virtual environments for hands-on experience

• Dedicated and experienced faculty with industry experience

• Relevant and up-to-date curriculum, certificates, and degrees

• Invested funds to update equipment and build an Emerging Technology Lab

• Availability of college resources such as the Tutoring Center and Library

• Buzzy bucks for purchasing course materials

• We measure student knowledge in meaningful ways by including short answer questions rather than multiple choice questions

• Live recording of notes for in-class lectures to be posted online

• Weekly programming exercises conducted in class to demonstrate knowledge of programming concepts

1. **Where your program does not meet this standard, please examine the possible reasons and note any actions that should be taken, if appropriate.**

The CIS program overall exceeded the institutional standard set for success and completion. However, there are individual classes in the CIS and CISG program that are below the Institutional Set Standards. Reasons for this could be attributed to:

• Shrinking number of full-time CIS faculty to support programs in a rapidly developing field, for example, artificial intelligence and autonomous technology

• CISG is teaching advanced courses (not previously taught) with foundational programming knowledge lacking that could be additionally supported by tutors.

• More complex and difficult courses not meeting standards could be improved with embedded tutoring

• Lack of up to date computer equipment, software, and facilities

• Emerging Technology cybersecurity labs need continuing maintenance on hardware, software, and facilities

1. **Compare your data analysis in questions 1 and 2 to the review of data in your 2023 Annual Program Review update (available on the** [**Program Review and Planning Committee**](https://committees.fullcoll.edu/program-review/) **website). Are there significant changes? Do you notice any patterns from year to year?**

The CIS program appears to be on an upward trend for Course Success and Retention, increasing 4.5% in Success and stable for Retention. The CISG program appears to be on a stable upward trend for Course Success but a decrease in Retention. The CISG Completion Rate dropped notably in 2021/2022 (-9%) but bounced back strongly in 2022/2023 with a 13.4% increase. In 2024, it experienced a slight decrease of -3.2%, suggesting some volatility. A factor that may be affecting this is CISG is teaching advanced courses (not previously taught) where foundational programming knowledge is lacking. To address this, tutors are being used as additional support.

# Part 2: Additional Resource Request Reasoning and Support

**We have reviewed our most recent self-study and have not identified any significant changes that necessitate resource requests for the upcoming academic year.**

**We have reviewed our most recent self-study and have identified significant changes that necessitate additional resource requests.**

**For programs that have identified significant changes that necessitate additional resource requests, answer the following questions for each separate resource request:**

1. **Briefly describe your resource request.**

The CIS faculty are resource constrained trying to maintain the current areas in CIS:

• Game Development

• Cyber Security

• Cloud Computing

• Networking

• Programming

• Web technologies

• Office productivity and automation

The CIS Department is seeking three full-time CIS Instructors to bolster our support of the bachelor’s degree in Drone/Autonomous Technology, creation of an eSports program supported by President Olivo (curriculum, class offerings, and K-12 outreach through dual enrollment and activities), artificial intelligence, and data analytics.

The CIS Department ranked 6th college-wide in the issuance of 31 certificates and 18th in the issuance of 33 degrees in Fall 2023. In Fall of 2023, 4 full time faculty equivalents and 11 adjuncts supported the CIS program consisting of 1,693 students. Also note that WASC Accreditation does evaluate the percentage of part-time faculty.

1. **Is this request related to an essential safety need?**

No

**Why must this resource request be processed now rather than during the Fall 2025 comprehensive self-study?**

The request is aimed at meeting the increasing demand from students and aligning with projected job growth, as substantiated by the BLS with a12.9% job growth compared to all occupations’ growth at 4%.

**How will this additional resource allocation specifically enhance your program’s services, activities, processes, etc. to continue or improve student learning and achievement?**

• Incorporating an instructor with specialized skills in the program will significantly enhance student learning and achievement by:

• Enhancing Student Engagement: The presence of an expert in high-demand areas can boost student motivation, leading to higher engagement and participation in class projects and discussions.

• Expanding Course Offerings: New and updated courses aligned with industry trends will provide students with relevant and cutting-edge knowledge, making them more competitive in the job market.

• Improving Instructional Quality: Expertise in specialized areas allows for deeper, more practical instruction, helping students grasp complex concepts and apply them effectively in real-world scenarios.

• Fostering Innovation: The instructor can introduce modern technologies and practices, fostering an innovative learning environment where students are encouraged to explore new ideas and approaches.

• Strengthening Industry Connections: An instructor with relevant industry experience can create opportunities for partnerships, internships, and networking, further supporting student achievement and career readiness.

• Promoting Lifelong Learning: By staying current with evolving technologies, the program can instill in students a mindset of continuous learning, preparing them for future advancements in their careers.

**Is the resource request personnel-related? If so, please provide evidence to justify the requested positions such as retirements, program growth or curricular demands, full-time/adjunct ratios, etc.**

• The CIS department subsists with 6 full-time faculty equivalents following a reduction of 50% from 2018 due to retirements supporting approximately the same number of CIS students. Please note that one faculty member is enrolled in the Phase-In Retirement Program and another faculty member teaches 9 units in the Business Program. So, there are essentially five full-time equivalents.

• Currently, two full-time faculty members in the department are over the age of retirement with two approaching retirement age. It's possible that, within the coming five years, retirements within the CIS department may lead to a potential reduction in the number of full-time faculty to just two, to accommodate the CIS, CISG, and CYBR (new Cybersecurity program started in Fall 2024) programs.

• For every full-time faculty member, there are more than 2 adjuncts.

**How will this additional resource allocation help you serve the college mission or strategic initiatives, and your program’s goals for improvement, as stated in your last self-study?**

Allocating additional resources to hire specialized instructors will directly support the college's mission and strategic initiatives, as well as the program's goals for improvement in the following core values:

• Diversity - Highly skilled instructors will help attract a diverse group of students by offering programs that appeal to underrepresented groups in technology fields. By integrating diverse perspectives and experiences into the curriculum, this resource will ensure that students from all backgrounds have equal access to high-quality, relevant education. According to GamesIindustry.biz, Esports attracts 79% of Hispanic adults, 77% of Black Americans and 67% of Asian/Pacific, compared to 62% of their white counterparts.

• Equity - Providing students with cutting-edge skills in emerging fields like cybersecurity or cloud computing can open doors to high-paying, in-demand careers. This helps bridge equity gaps by offering all students, regardless of their background, the opportunity to excel in the tech industry and gain access to meaningful career paths.

• Inclusivity - A specialized instructor can help design inclusive learning materials and teaching strategies that accommodate diverse learning styles and backgrounds, ensuring equitable access to quality education for all students.

• Intellectual Curiosity - By introducing cutting-edge technologies and innovative practices, the instructor will stimulate intellectual curiosity, encouraging students to explore, question, and think critically. This aligns with the college's commitment to fostering a culture of lifelong learning and academic exploration.

**For each separate resource request, complete this chart with details of the request:**

|  |  |
| --- | --- |
| **Type of Resource** |  |
| Personnel | Faculty |
| Facilities |  |
| Supplies |  |
| Computer Hardware |  |
| Computer Software |  |
| Training |  |
| Other |  |
| **Total Requested Amount:** | 3 Faculty positions |

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| --- |
| **Is the funding requested ongoing or one-time funding?**  Ongoing funds |
| **Is the funding requested for**[**enrollment and reengagement activities?**](https://ie.fullcoll.edu/wp-content/uploads/sites/27/2024/05/ER-2.0-Program-Review-Guide.pdf)  Yes |

**For each separate resource request:**

1. **Briefly describe your resource request.**

The equipment requested will support the new eSports program. The equipment consists of gaming laptops, eSports quality keyboards and eSports quality mice and computer station chairs. Along with the laptops the requested equipment includes six gaming consoles to be used as part of the eSport curriculum and during eSports related events and tournaments.

1. **Is this request related to an essential safety need?**

No

**Why must this resource request be processed now rather than during the Fall 2025 comprehensive self-study?**

The equipment is needed to support the ESports program competitions and for recruitment from the high schools. Without supporting hardware, the ESports competition classes cannot be held and high school recruitment will be difficult. Obtaining this hardware is also crucial to establishing an eSport program at FC college.

**How will this additional resource allocation specifically enhance your program’s services, activities, processes, etc. to continue or improve student learning and achievement?**

1. Providing professional level ESports equipment allows the department to create an environment that supports competitive ESports events and a practice room for classes.

2. Using ESports laptops to present our program to high school students helps the CISG program recruit students.

3. Providing students with an ESports pathway to enrolling at Fullerton College allows these new students to explore other areas at Fullerton College and enroll in other classes.

**Is the resource request personnel-related? If so, please provide evidence to justify the requested positions such as retirements, program growth or curricular demands, full-time/adjunct ratios, etc.**

No

**How will this additional resource allocation help you serve the college mission or strategic initiatives, and your program’s goals for improvement, as stated in your last self-study?**

Currently eSports is extremely popular with many high schools. Creating a pathway from high schools to college through ESports improves our department goals of increasing enrollment and increasing student success. Currently, enrolled students also demonstrate an interest in eSports curriculum and activities.

**For each separate resource request, complete this chart with details of the request:**

|  |  |
| --- | --- |
| **Type of Resource** |  |
| Personnel |  |
| Facilities |  |
| Supplies |  |
| Computer Hardware | 15 gaming mice @ $100 each totaling $1,500  15 ESports quality gaming chairs @ $1,000 each totaling $15,000  15 Laptops @ $3,500 each totaling $52,500  Specifications  • Graphics Card: NVIDIA GeForce RTX 4090  • Processor: Intel Core i9-14900HX, 14th Generation  • Display: 16-inch OLED, QHD+ resolution, 240Hz refresh rate  • Memory (RAM): 32GB  • Storage: 2TB SSD  • Operating System: Windows 11  • Keyboard: Razer Chroma RGB  • Feature: Snap Tap technology  Gaming Consoles  • Nintendo Switch (OLED Model): 2 units @ $350 each = $700  • PlayStation 5: 2 units @ $500 each = $1,000  • Xbox Series X: 2 units @ $500 each = $1,000  Controllers  • Nintendo Switch Joy-Con (Pair): 4 pairs @ $80 each = $320  • Nintendo Switch Pro Controller: 2 units @ $70 each = $140  • PlayStation DualSense Wireless Controller: 6 units @ $70 each = $420  • Xbox Wireless Controller: 6 units @ $60 each = $360  Additional Gaming Accessories  • Nintendo Switch Dock Set: 2 units @ $90 each = $180  • PlayStation 5 Charging Station (DualSense): 2 units @ $30 each = $60  • Xbox Play & Charge Kit: 6 units @ $25 each = $150  • Headsets (compatible with all consoles): 6 units @ $80 each = $480  • External SSD Storage (2TB per console): 3 units @ $200 each = $600  Miscellaneous Accessories  • HDMI Cables (High-Speed, 6ft): 6 units @ $10 each = $60  • Gaming Chairs: 6 units @ $150 each = $900  • Surge Protector (6-outlet): 2 units @ $30 each = $60  Total $75,430 |
| Computer Software | $ 18,000 (video game licenses) |
| Training |  |
| Other |  |
| **Total Requested Amount:** | $93,430 |

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| **Is the funding requested ongoing or one-time funding?**  One-time funds |
| **Is the funding requested for**[**enrollment and reengagement activities?**](https://ie.fullcoll.edu/wp-content/uploads/sites/27/2024/05/ER-2.0-Program-Review-Guide.pdf)  Yes |

**For each separate resource request:**

1. **Briefly describe your resource request.**

Addition of 3 lab technicians to maintain and operate lab operations, security operations center, and equipment. Addition of storage space to accommodate growing equipment inventory for lab operations and future SOC operations.

1. **Is this request related to an essential safety need?**

No

**Why must this resource request be processed now rather than during the Fall 2025 comprehensive self-study?**

Growing equipment inventory and providing student training for lab operations and future SOC operations.

**How will this additional resource allocation specifically enhance your program’s services, activities, processes, etc. to continue or improve student learning and achievement?**

Requirement for operating lab operations, security operations center, and equipment. Addition of storage space to accommodate growing equipment inventory for lab operations and future SOC operations.

**Is the resource request personnel-related? If so, please provide evidence to justify the requested positions such as retirements, program growth or curricular demands, full-time/adjunct ratios, etc.**

Requirement for operating lab operations, security operations center, and equipment. Addition of storage space to accommodate growing equipment inventory for lab operations and future SOC operations.

**How will this additional resource allocation help you serve the college mission or strategic initiatives, and your program’s goals for improvement, as stated in your last self-study?**

Lab operations, security operations center, and equipment. Addition of storage space to accommodate growing equipment inventory for lab operations and future SOC operations.

**For each separate resource request, complete this chart with details of the request:**

|  |  |
| --- | --- |
| **Type of Resource** |  |
| Personnel | Professional Expert |
| Facilities | Space facilities build out, furniture, space allocation, electrical, and data $45K |
| Supplies |  |
| Computer Hardware |  |
| Computer Software |  |
| Training |  |
| Other |  |
| **Total Requested Amount:** | $75,000 personnel and $75,000 facilities |

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| --- |
| **Is the funding requested ongoing or one-time funding?**  One-time funds |
| **Is the funding requested for**[**enrollment and reengagement activities?**](https://ie.fullcoll.edu/wp-content/uploads/sites/27/2024/05/ER-2.0-Program-Review-Guide.pdf)  No |